DOCUMENT RESUME

ED 214 462 HE 014 930

AUTHOR Blumberg, Phyllis; And Others
TITLE Psychosocial Characteristics of Female Medical Students.
PUB DATE Mar 82
NOTE 14p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adjustment (to Environment); Anxiety; Comparative Analysis; Depression (Psychology); *Females; Higher Education; Individual Needs; *Interpersonal Relationship; Males; *Medical Students; Physicians; *Psychological Characteristics; Quality of Life; *Self Concept; Self Evaluation (Individuals)
IDENTIFIERS Significant Other

ABSTRACT

Self-perceptions of male and female medical students on various psychosocial characteristics were compared in 1980. The questionnaire consisted of: the Social Support Networks questions, the Social Readjustment Rating Scale (Holmes and Rahe, 1967), the General Well Being Scale (Gurin, Veroff, and Felds, 1960), the Zung Self-Rating Depression Scale (1965), and the Taylor Manifest Anxiety Scale (1953), and demographic questions. Thirty-two third-year medical students, who were white and middle class, were assessed. Female medical students considered physicians to be part of their social support network much more frequently than did male students. The social support networks of both sexes included friends, relatives, and significant others of the opposite sex (i.e., boy or girl friend or spouse). The females appeared to be experiencing more changes, more depression, and less general well-being than the males. About half of the females and half of the males review material for examinations by themselves without talking over confusing material with others. None of the people that the males speak to when anxious are females. It is hypothesized that increased life events may cause the more adaptive people to seek out additional help, and this help may result in measures of increased social support. The fact that the women relied more on other physicians than their male counterparts may confer an advantage on women in their overall short-term adaptation. It could be that this factor counters the potential negative impact of lowered well-being and depression. A bibliography is appended. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED214462

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Phyllis Blumberg

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Psychosocial Characteristics of Female Medical Students

Phyllis Blumberg, Ph.D., Joseph A. Flaherty, M.D. and

Ann E. Morrison, A.B.

Paper presented at the annual meeting of the American Educational Research Association in March, 1982, in New York, N.Y.

Reprints should be addressed to Phyllis Blumberg, Ph.D., Department of Psychiatry, University of Illinois - Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

HE 014 930

Psychosocial Characteristics of Female Medical Students

PHYLLIS BLUMBERG, PH.D., JOSEPH A. FLAHERTY, M.D. and ANN E. MORRISON, A.B.
University of Illinois - Medical Center

In order to compare Psychosocial characteristics of female medical students to those of males, thirty-two medical students were studied. Females listed significantly more people as part of their Social Support Network than males did, but the strength of the support from the first five people in their networks did not differ between the sexes. The females listed more physicians as part of their network than the males. The two groups differed on their life event changes, psychological difficulties, and depression, with the females having higher scores. Support from many individuals may help women to cope with their psychological difficulties.

Women are making significant strides within medical schools. Recent statistics show that more women are matriculating in medical school, that the attrition rate for women has greatly diminished to where it is very close to that of men, and that female students perform as well as males in medical school (1,2). While these external markers indicate greater numbers of women are entering the medical profession, recent literature suggests that the psychosocial adjustment to medical school is more difficult for women than it is for men (3,4). Common adjustment problems of women include high anxiety, low self-image, feelings of isolation, and a great deal of health, personal and interpersonal problems. Women students sought psychiatric services three times more often than their male classmates did (5,6). This study will attempt to explain this reported phenomenon that female medical students report more non-academic difficulties than male students do.

Previous research was based upon retrospective studies of women seeking counseling, informal assessments of support groups, or questionnaires of women only. It does not offer any basis of comparison between men and women within the total class. This study provides a comparison between men and women within the total class. This study provides a comparison of self-perceptions between male and female medical students on various psychosocial characteristics. Psychosocial research in the 1950's and 60's on medical students studied males only due to the small number of women in medical school, or the researchers did not consider sex differences as relevant (7,8). These studies document the fact that medical school can be very stressful and that one of the ways that students cope with this

stress is to integrate themselves into a student culture. It is not known how well women have been integrated into this student culture, or whether such integration influences the adjustment of men or women in medical school.

Methodology: Questionnaires were developed and sent to all participants in the spring of 1980. The questionnaire consisted of several parts: the Social Support Networks questions, the Social Readjustment Rating Scale (9), the General Well Being Scale (10), the Zung Self- rating depression Scale (11), the Taylor Manifest Anxiety Scale (12), and demographic questions.

The Social Support Network Questions were developed by one author and asked the participants to list by initials and personal characteristics (i.e. sex, age, occupation, and relationship) all people who are important to them. The participants rated each of the top five people on their list in terms of frequency of contact, availability, breadth and depth of topics discussed, mutual practical help, mutual emotional support and future direction of their relationship. The respondents also had to imagine themselves feeling generally anxious, experiencing a personal loss, and having domestic problems. In each of these situations they had to rank how well the top five people would satisfy their needs in each situation and how these people would make them feel. The scoring system reflected the components of the social support network and the larger the total score, the stronger the social support network. The social support network instrument had been previously field-tested.

The Social Readjustment Rating Scale lists 43 life events ranging from major events, i.e., death of spouse to lesser events, i.e., minor

violations of the law, and the participants check those events which occurred to them in the past year. High scores (indicating major life events changes or numerous life events) are associated with physicial psychiatric disturbances. The General Well Being Scale lists 16 symptoms which indicate psychological difficulty. This scale has been used as a rough psychiatric, diagnostic screening instrument. The Zung Self-Rating Depression Scale is a 20 item scale of self-reported depression. This scale has been repeatedly used to identify depression in both psychiatric and general populations. Sex differences have not been reported on any of the selected standardized tests.

A follow-up request, one month later, was sent to participants in order to increase the number of participants.

Participants: Sixteen females and sixteen males in the third year of a College Medicine was selected for study. This class was chosen because these students appeared to be in a relatively stable time in their medical student career. The other three classes were preparing for major examinations, and this class was not. Since these students have completed most of their required clerkships, they are familiar with their role in the hospital and are not anticipating major changes in their responsibilities. The women were randomly chosen from a population of 39 females. The men were selected by taking the next male name alphabetically after each selected female name. The participants were white, middle class students. All of the participants had completed the same amount of their medical studies when they participated in the spring of their third year.

RESULTS

Demographic Data: All of the students are in their mid-twenties. The demographic data on these two groups of students are similar in terms of marital status, size of hometown, and father's educational level. Seven of the sixteen females are single, five are married, three are engaged, and one is divorced. Eleven of the males are single, four are married, one is divorced and none reported being engaged. Eleven females come from a metropolitian area, with the remaining five from a rural area; twelve males are from a metropolitian area. The majority of the fathers from both groups have a college degree. Two fathers of females are physicians, one father of a male is a physician. There is a trend toward the mothers of the females having more education than the mothers of the males. Four mothers of the women are homemakers, eight mothers of the men are homemakers. Seven mothers of the females are currently employed in a professional job, four mothers of the males are similarly employed. None of the mothers are physicians. The four non-professional mothers of the daughters who were employed outside the home were in sales or bank clerk positions. The three non-professional mothers of the sons, who were gainfully employed were office workers. One mother of one male and of one female were deceased.

Social Support Network: The mean number of people/organizations that females list as part of the social support network is significantly larger than the mean for men (females: $\bar{X} = 10.125$, s.d. = 3.12, Males: $\bar{X} = 7.313$, s.d. = 2.70; $t = 2.728$, $p < .01$). Yet the strength of the support of the first five people on the students' lists do not differ by sex

(females: $\bar{X}$ = 86.75, s.d. = 13.78; males $\bar{X}$ = 78.937, s.d. = 15.50; t = 1.54, $p > .05$). The possible range of scores on the strength of the supports is 10 through 112. Previous research using this scale indicates that psychiatric out-patients tend to have scores in the lower third of the range. Norms are not yet available on other populations. The relatively high numbers for all of the students indicates that they perceive a fair amount of support, and that the quality of the support is good. The typical support network for both sexes is composed of both parents, a sibling, friends, a close "boy/girl friend"/ spouse, and class-mates. Only one male and one female did not list an alive mother as a support; only two females and three males did not list an alive father as a support. Females list more than twice as many physicians in their top five individuals than males do (females = 15, males = 7). Females also listed 15 physicians in their secondary list of supprots (i.e. individuals listed beyond the first five people), males did not list any physicians as secondary supports. All of the physicians listed by both the men and the women were males. Thirty seven percent of the physicians the women considered in their social support network and 28% of the physicians the men listed serve academic roles for the respondent (such as advisor). Blood relatives constituted 16% of the physicians the females listed and 14% for the males. Thirty seven percent of the physicians listed by the females and 43% of those listed by the males are friends or serve as a significant other for the respondents. Therapist or analyst constituted 11% of the physicians in the females' support network, and 14% in the males' support network. The roles the physicians perform for these students did not differ by sex ($\chi^2 = .502$, df = 3, $p > .05$). Very few people listed

organizations as being a source of social support, or that they even belonged to many organizations.

About half of the females and half of the males review material for examinations by themselves without talking over confusing material with others. For the half of the sample that do review with other people, both groups on the average speak to two people who are usually classmates. None of the people that the males speak to when anxious are females. One fifth of the people that the females speak to when anxious are female, all of these women are classmates.

Standardized tests: Females had significantly more life event changes within the last year as measured by the Social Readjustment Rating Scale (females: $\bar{X}$ = 158.63, s.d. = 78.93; males: $\bar{X}$ = 107.250; s.d. = 82.54; $t = 2.149$, $p < .05$). (Possible range 0 - 1409, but many points are given for major events such as death in the family or divorce. Previous research shows that adults who have scores over 200 have greater frequencies of physical and psychiatric problems including depression than people with scores lower than 200). Scores over 100 for both groups indicates that during the third year of medical school many changes occur. Yet there are wide variations in the number of changes as shown by the large standard deviations.

These medical students are feeling psychologically well as evidenced by their good General Well Being Scores, although the females are experiencing significantly more psychological difficulties than the men. (Possible range of scores 0 - 48. The lower the score the better the general well being. Females $\bar{X}$ = 13.428, s.d. = 4.41; Males $\bar{X}$ = 9.875, s.d. = 3.56; $t = 2.515$, $p < .05$). The social support network scores were

not significantly correlated with the General Well Being Scores; there was almost no relationship between the two ($r = .04$), for the females there was a .40 relationship between the two scores for the males. Females rate themselves as significantly more depressed than the males on the Zung Scale. (Possible range 20 - 80. The higher the score the greater the depression. Females: $\bar{X} = 45.062$, s.d. = 7.903; males: $\bar{X} = 39.500$, s.d. = 6.94, $t = 2.116$, $p < .05$. The normal control validating sample had a mean of 33 and a range of 25 - 43 on the Zung Scale). The scores on the Taylor Scale of Manifest Anxiety Scale did not differ by sex, nor are they different from the university undergraduate students with whom the scale was originally validated (median for normative university students 14.56, this study - $\bar{X} = 16.938$; s.d. = 8.19; male $\bar{X} = 13.188$, s.d. = 7.38; $t = 11.361$, $p > .05$).

Discussion

The finding that female medical students consider physicians to be part of their social support network much more frequently than male students do was unexpected. Women are frequently claiming that they are excluded from the "Old Boy Network" in all professional fields. Yet these women seem to have more access to physicians, and perceive more support from physicians than the male medical students. While it is not clear that the physicians the students consider to be social supports are part of the "Old Boy Network", many of them are established physicians as evidenced by their age and position. The types of support the students received from these physicians were diverse, but do not differ by sex of the respondent. Two hypotheses may explain this finding.

The Social Support Networks of both sexes includes friends, and significant-others of the opposite sex, i.e., "boy-girl friend" or spouse. For the women, these friends or spouses include a greater proportion of physicians than the friends and spouses of the men. Women, generally, tend to date and marry men who have equal or greater amounts of education, and who are the same age or older. Men, on the other hand, often date and marry women who have lower levels of education, and who are younger. Therefore, this reasoning would predict that women would have more friends and spouses who are physicians, than the men.

Women traditionally have sought outside help more often than men. Men are trained to be independent, to have perceptions of not needing help and to be able to succeed on their own. Therefore, women may feel more comfortable seeking out physicians to talk to and who become role models and social supports. In this case, the women's behavior may be more adaptive than the men's in terms of making contacts or learning more medicine.

The females in this study appear to be experiencing more changes, more depression, and less general well being than the males. These three factors have been previously found to be related (7,8). These three factors also help to explain why female medical students as reported earlier (3,4) perceive more non-academic difficulties than male students do.

Previous studies on general populations have led researchers to conclude that social support networks buffer the negative effects of increased life events and reduce the risk of developing depressive symptoms or a lowered sense of well being (13). The results of this

project give evidence to an alternate hypothesis entertained first by Lin (14). That is, that increased life events may cause the more adaptive people to seek out additional help from their environment, this "help" may then result in measures of increased social support. The increased numbers of people in the social support network of women support this alternate hypothesis. Probably more important than the quantity of support is the difference the type of people chosen as supports. The women in this study rely more on other physicians than do their male counterparts, the heuritics of this type of support in the medical school environment may confer a particular advantage on women in their overall short-term adaptation. In fact, it could be that this factor counters the potential negative impact of lowered well being and depression and allows women to make as steady an academic progress through this medical school as men (School report).

It would not be reasonable to make far-reaching conclusions from this pilot study with one time measurements and low numbers of students. Nor would it be appropriate to generalize from this study to the population of women. It does provide initial data to support the notion that men and women experience different psycho-social pressures and employ different adaptational mechanisms towards their steady progress through medical school. The fact that the net results are the same (i.e. they both graduate after the same number of years) does not exclude the possibility that these different adaptational styles have an effect. Whether these psychosocial characteristics effect long term variables such as specialty choice, career satisfaction, or social function will require longitudinal research.

REFERENCES

1. Witte, M.H. Let the Experiment be fairly made. J. Am Med. Assoc., 1978 21, 2276-2277.
2. Holmes, F.F., Holmes, G.E. & Hassanien, R. Performance of male and female medical students in a medicine clerkship. J. Am Med. Assoc., 1978, 21
3. Kaplan, L.H., & Pao, J. Problems facing women students in schools of medicine, law, and business. J. Am. College Health Assoc, 1977, 26, 76-78.
4. Roos, N.R., Gaymont, M. & Colwill, N.L. Female and Physician: A sex role incongruity. J. Med. Ed. 1977, 52, 345-346.
5. Heins, M., & Thomas, J. Women medical students: A new appraisal. J. Am. Med Wom Assoc. 1979, 34, 408-415.
6. Davidson, V.M. Coping Styles of Women Medical Students. J. Med Ed. 1978 53, 902-907.
7. Becker, H.S., Gear, B., Hughes, E.C. & Strauss, A.M. Boys in White, Student Cultures in Medical School, Chicago: University of Chicago Press, 1961.
8. Coombs, R.H. Mastering Medicine Professional Socialization in Medical School, New York: The free Press, 1978
9. Holmes, T.H. and Rahe, R.H. The Social Readjustment Rating Scale. Psychosomatic Resrch, 1967, 11, 213.
10. Gurin, G., Veroff, J. and Felds, S. Americans View Their Mental Health. New York: Basic Books, Inc. 1960.
11. Zung, W.W.K. A Self-Rating Depression Scale. Arch Gen Psychiatry, 1965, 12, 63-71.

12. Taylor, J.A. A Personality Scale of Manifest Anxiety. J. Soc Pysch, 1953, 48, 285-291.

13. Kaplan, B.H., Cassel, J.C., Gore, S. Social Support and Health. Medical Care, 15, November 5, Supplement pp. 47-57.

14. Lin, N., Ensel, W., Simeone, R., et. al. Social Support, stressful life events and illness: A model and an empirical test. J. Health and Soc Behavior, 1979, 20, 108-119.